

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
6 October 2005 (06.10.2005)

PCT

(10) International Publication Number
WO 2005/093190 A1

(51) International Patent Classification⁷: **E04H 4/16**
(21) International Application Number:
PCT/BR2004/000042

(22) International Filing Date: 26 March 2004 (26.03.2004)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): **WBA CONSULTORIA E VENDAS INTERNACIONAIS LTDA** [BR/BR]; Alameda Rio Negro, 1105, Alphaville, 06454-913 Barueri-SP (BR).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **RIBEIRO, José, Luiz, Whitaker** [BR/BR]; Alameda Rio negro, 1105, Alphaville, 06454-913 Barueri-SP (BR).

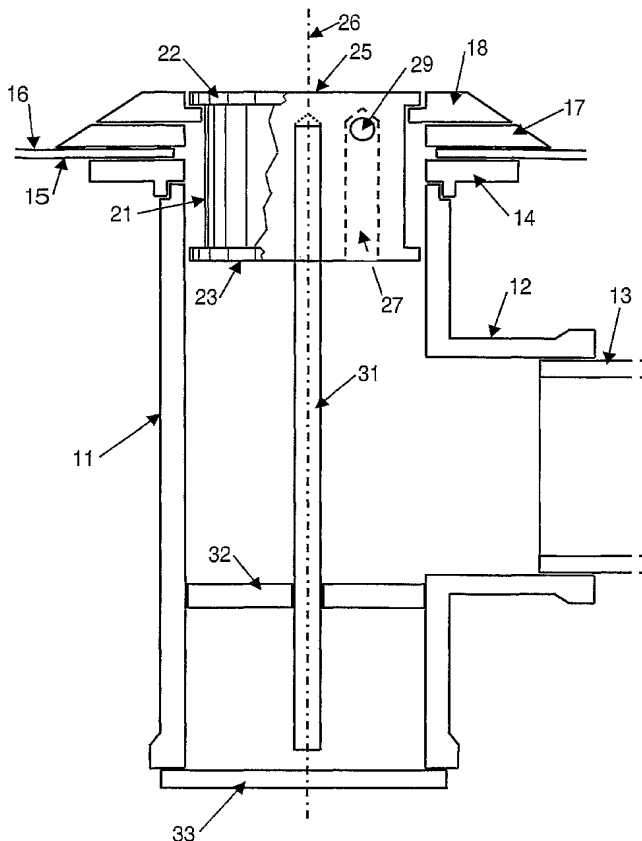
(74) Agent: **CRUZEIRO NEWMARC PATENTES E MARCAS LTDA**; Rua Itajobi, 79, Pacaembú, 01249-010 São Paulo, SP (BR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,

[Continued on next page]

(54) Title: CONSTRUCTIVE DESIGN FOR RESERVOIR AND POOL CLEANING DEVICE



(57) Abstract: Constructive design for reservoir and pool cleaning device using successive and intermittent water jets, adjacent to the surface of the bottom of said reservoirs and pools, comprising a cleaning head built into said bottom, equipped with a piston (21) substantially cylindrical movable between a first lower resting position and a second operation position, in which the upper part of said piston surpasses said bottom leaving uncovered the outlet hole (29) of said jets (43), the direction of the successive jets undergoing random angular increases by means of said piston's axial rotation at the interval of its movement between the referred positions, the momentum produced by said rotation provided only by the jet's reaction force (43) expelled through said hole, which axel is eccentrically placed in relation to said piston's axel.

WO 2005/093190 A1



GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*